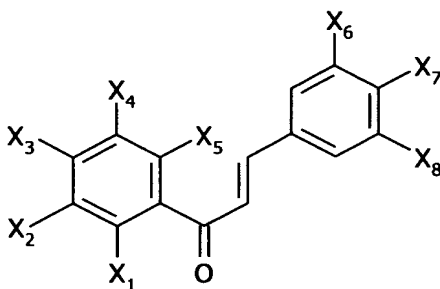


## CLAIMS

1. Compounds derived from substituted 1,3-diphenylprop-2-en-1-one represented by general formula (I) below :



(I)

in which :

$X_7$  represents a group corresponding to the following formula:  $G_7-R_7$  in which  $G_7$  is an oxygen or sulfur atom and  $R_7$  is an alkyl chain substituted by a substituent from group 1 or a substituent from group 2, optionally  $R_7$  can also be substituted by an aryl group,

the substituents from group 1 are selected in the group consisting of carboxy groups having the formula:  $-COOR_a$ , carbamoyl groups having the formula :  $-CONR_bR_c$  or the tetrazolyl group,

the substituents from group 2 are selected in the group consisting of sulfonic acid ( $-SO_3H$ ) and sulfonamide groups having the formula :  $-SO_2NR_bR_c$ ,

with  $R_a$ ,  $R_b$  and  $R_c$ , which are the same or different, representing a hydrogen atom or an alkyl group substituted or not,

the  $X_i$  groups with  $i = 1, 2, 3, 4$  or  $5$ , which are the same or different, represent a halogen atom or a thionitroso group or respectively correspond to the formula  $(G_i-R_i)_n-G'_i-R'_i$  in which :

- $n$  can have the values 0 or 1
- $G_i$  and  $G'_i$ , which are the same or different, represent a single bond, an oxygen atom or a sulfur atom,

- $R_i$  and  $R'_i$ , which are the same or different, represent an alkyl, alkenyl, aryl or heterocycle group,
- $R'_i$  can also represent a hydrogen atom,

the  $X_i$  groups with  $i = 6$  or  $i = 8$ , which are the same or different, represent a halogen atom or correspond to the formula  $G'_i-R'_i$ ,  $G'_i$  and  $R'_i$  being such as defined hereinabove,  $X_6$  and  $X_8$  not simultaneously representing a hydrogen atom,

$X_i$  with  $i = 1, 2, 3, 4, 5, 6$  or  $8$  not representing a heterocycle bound directly to the aromatic ring of the 1,3-diphenyl prop-2-en-1-one,

with the exception of compounds represented by formula (I) in which simultaneously :

- one of the groups  $X_1, X_2, X_3, X_4$  or  $X_5$  is a hydroxyl group,
- $G_7$  is an oxygen atom,
- and one of the groups  $X_6$  or  $X_8$  is a hydrogen atom or a halogen or a hydroxyl or alkyloxy group,

with the exception of compounds represented by formula (I) in which simultaneously :

- the  $X_1, X_2$  and  $X_4$  groups simultaneously represent a hydrogen atom,
- the  $X_6$  and  $X_8$  groups represent  $G'_iR'_i$ ,
- the  $X_5$  group represents a thionitroso group or a  $G'_iR'_i$  group,
- the  $X_3$  group represents a halogen or a  $G'_iR'_i$  group,

in which  $G'_i$  represents an oxygen atom, a sulfur atom or a single bond and  $R'_i$  represents a saturated, linear, branched or cyclic alkyl group, halogenated or not, or a hydrogen atom.

2. Compounds according to claim 1, characterized in that  $X_1$  and  $X_5$  are hydrogen atoms.

3. Compounds according to either one of claims 1 or 2, characterized in that  $X_2$  and  $X_4$  are alkyl groups.

4. Compounds according to claim 1, characterized in that  $X_1$ ,  $X_3$  and  $X_4$  are alkyl groups.

5. Compounds according to claim 1, characterized in that  $X_1$ ,  $X_2$ ,  $X_4$  and  $X_5$  are hydrogen atoms.

6. Compounds according to any one of the previous claims, characterized in that  $X_6$  and  $X_8$  are alkyl groups.

7. Compounds according to the previous claim, characterized in that  $X_1$  and  $X_5$  are hydrogen atoms.

8. Compounds according to the previous claim, characterized in that  $X_2$  and  $X_4$  are alkyl groups.

9. Compounds according to claim 1, characterized in that  $X_1$ ,  $X_3$ ,  $X_4$ ,  $X_6$  and  $X_8$  are alkyl groups.

10. Compounds according to claim 1, characterized in that  $X_6$  and  $X_8$  are alkyl groups and  $X_1$ ,  $X_2$ ,  $X_4$  and  $X_5$  are hydrogen atoms.

11. Compounds according to any one of the previous claims, characterized in that  $X_3$  represents a halogen atom or a thionitroso group or corresponds to the formula  $(G_i-R_i)_n-G'_i-R'_i$  such as defined in claim 1, in which  $G'_i$  represents an oxygen atom or a sulfur atom.

12. Compounds according to any one of the previous claims, characterized in that at least one of the groups  $G_i$  or  $G'_i$  represents a sulfur atom with  $i$  taking the values 1, 2, 3, 4, 5, 6, 7 or 8.

13. Compounds according to any one of the previous claims, characterized in that they are selected in the group consisting of :

1-(4-((R,S)-5-[1,2]dithiolan-3-ylpentyloxy)-3,5-dimethylphenyl)-3-(4-carboxydimethylmethyloxy-3,5-dimethylphenyl)prop-2-en-1-one;

1-(4-Mercapto-3,5-dimethylphenyl)-3-(4-carboxydimethylmethyloxy-3,5-dimethylphenyl)prop-2-en-1-one;

5 1-(4-Cyclohexylethylthio-3,5-dimethylphenyl)-3-(4-carboxydimethylmethyloxy-3,5-dimethylphenyl)prop-2-en-1-one;

1-(2,5-Dihydroxy-3,4,6-trimethylphenyl)-3-(4-carboxydimethylmethyloxy-3,5-dimethylphenyl)prop-2-en-1-one;

10 1-(2,5-Dimethoxy-3,4,6-trimethylphenyl)-3-(4-carboxydimethylmethoxy-3,5-dimethylphenyl)prop-2-en-1-one;

1-(2,5-Dihydroxyphenyl)-3-(4-carboxydimethylmethyloxy-3,5-dimethylphenyl)prop-2-en-1-one;

1-(2,5-Dimethoxyphenyl)-3-(4-carboxydimethylmethyloxy-3,5-dimethylphenyl)prop-2-en-1-one;

15 1-(4-Phenylethyloxyphenyl)-3-(4-carboxydimethylmethyloxy-3,5-dimethylphenyl)prop-2-en-1-one;

1-(4-(Morpholin-4-ylethyloxy)phenyl)-3-(4-carboxydimethylmethyloxy-3,5-dimethylphenyl)prop-2-en-1-one;

20 1-(4-(Pentylthioethyloxy)phenyl)-3-(4-tert-butyloxycarbonyldimethylmethyloxy-3,5-dimethylphenyl)prop-2-en-1-one;

1-(4-(Pentylthioethyloxy)phenyl)-3-(4-carboxydimethylmethyloxy-3,5-dimethylphenyl)prop-2-en-1-one;

1-(4-Hydroxy-3,5-dimethylphenyl)-3-(4-tert-butyloxycarbonyldimethylmethyloxy-3,5-dimethylphenyl)prop-2-ene-1-one;

25 1-(4-Hydroxy-3,5-dimethylphenyl)-3-(4-carboxydimethylmethyloxy-3,5-dimethylphenyl)prop-2-ene-1-one;

1-(4-((R,S)-5-[1,2]dithiolan-3-ylpentyloxy)phenyl)-3-(4-tert-butyloxycarbonyldimethyl methyloxy-3,5-dimethylphenyl)prop-2-en-1-one;

30 1-(4-((R,S)-5-[1,2]dithiolan-3-ylpentyloxy)phenyl)-3-(4-carboxydimethylmethyloxy-3,5-dimethylphenyl)prop-2-en-1-one;

1-(4-Methylthiophenyl)-3-(4-tert-butyloxycarbonyldimethylmethyloxy-3,5-dibromophenyl)prop-2-ene-1-one;

1-(4-Methylthiophenyl)-3-(4-carboxydimethylmethoxy-3,5-dibromophenyl)prop-2-ene-1-one;

1-(4-Cyclohexylethyloxyphenyl)-3-(4-tert-butyloxycarbonyldimethylmethoxy-3,5-dimethylphenyl)prop-2-en-1-one;

5 1-(4-Cyclohexylethyloxyphenyl)-3-(4-carboxydimethylmethoxy-3,5-dimethylphenyl)prop-2-en-1-one;

1-(4-Methylthio-3,5-dimethylphenyl)-3-(4-tert-butyloxycarbonyldimethylmethoxy-3,5-dimethylphenyl)prop-2-en-1-one;

10 1-(4-Methylthio-3,5-dimethylphenyl)-3-(4-carboxydimethylmethoxy-3,5-dimethylphenyl)prop-2-en-1-one;

1-(4-Propyloxy-3,5-dimethylphenyl)-3-(4-tert-butyloxycarbonyldimethylmethoxy-3,5-dimethylphenyl)prop-2-en-1-one;

1-(4-Propyloxy-3,5-dimethylphenyl)-3-(4-carboxydimethylmethoxy-3,5-dimethylphenyl)prop-2-en-1-one;

15 1-(4-Methoxy-3,5-dimethylphenyl)-3-(4-tert-butyloxycarbonyldimethylmethoxy-3,5-dimethylphenyl)prop-2-en-1-one;

1-(4-Methoxy-3,5-dimethylphenyl)-3-(4-carboxydimethylmethoxy-3,5-dimethylphenyl)prop-2-en-1-one;

20 1-(4-Hexyloxy-3,5-dimethylphenyl)-3-(4-tert-butyloxycarbonyldimethyl methoxy - 3,5-dimethylphenyl)prop-2-en-1-one;

1-(4-Hexyloxy-3,5-dimethylphenyl)-3-(4-carboxydimethylmethoxy-3,5-dimethylphenyl)prop-2-en-1-one;

1-(4-Cyclohexylethyloxy-3, 5-dimethylphenyl)-3-(4-tert-butyloxycarbonyldimethyl methoxy-3,5-dimethylphenyl)prop-2-en-1-one;

25 1-(4-Cyclohexylethyloxy-3, 5-dimethylphenyl)-3-(4-carboxydimethylmethoxy-3,5-dimethylphenyl)prop-2-en-1-one;

1-(4-Cyclohexylthioethyloxyphenyl)-3-(4-tert-butyloxycarbonyldimethylmethoxy-3,5-dimethylphenyl)prop-2-en-1-one;

30 1-(4-Cyclohexylthioethyloxyphenyl)-3-(4-carboxydimethylmethoxy-3,5-dimethylphenyl)prop-2-en-1-one;

1-(2,4,5-Trimethylphenyl)-3-(4-tert-butyloxycarbonyldimethylmethoxy-3,5-dimethylphenyl)prop-2-en-1-one;

1-(2,4,5-Trimethylphenyl)-3-(4-carboxydimethylmethoxy-3,5-dimethylphenyl)prop-2-en-1-one;

1-(4-Cyclohexylthioethoxy-3,5-dimethylphenyl)-3-(4-tert-butylloxycarbonyldimethylmethoxy-3,5-dimethylphenyl)prop-2-en-1-one;

5 1-(4-Cyclohexylthioethoxy-3,5-dimethylphenyl)-3-(4-carboxydimethylmethoxy-3,5-dimethylphenyl)prop-2-en-1-one;

1-(4-Methylthiophenyl)-3-(4-tert-butylloxycarbonyldimethylmethoxy-3-fluorophenyl)prop-2-en-1-one;

10 1-(4-Methylthiophenyl)-3-(4-carboxydimethylmethoxy-3-fluorophenyl)prop-2-en-1-one;

1-(2,3,4,5,6-Pentamethylphenyl)-3-(4-tert-butylloxycarbonyldimethylmethoxy-3,5-dimethylphenyl)prop-2-en-1-one;

1-(2,3,4,5,6-Pentamethylphenyl)-3-(4-carboxydimethylmethoxy-3,5-dimethylphenyl)prop-2-en-1-one;

15 1-(4-Phenylloxyphenyl)-3-(4-tert-butylloxycarbonyldimethylmethoxy-3,5-dimethylphenyl)prop-2-en-1-one;

1-(4-Phenylloxyphenyl)-3-(4-carboxydimethylmethoxy-3,5-dimethylphenyl)prop-2-en-1-one;

20 1-(4-Methoxy-3-fluorophenyl)-3-(4-tert-butylloxycarbonyldimethylmethoxy-3,5-dimethylphenyl)prop-2-en-1-one;

1-(4-Methoxy-3-fluorophenyl)-3-(4-carboxydimethylmethoxy-3,5-dimethylphenyl)prop-2-en-1-one;

1-(4-Methoxy-3-methylphenyl)-3-(4-tert-butylloxycarbonyldimethylmethoxy-3,5-dimethylphenyl)prop-2-en-1-one;

25 1-(4-Methoxy-3-methylphenyl)-3-(4-carboxydimethylmethoxy-3,5-dimethylphenyl)prop-2-en-1-one;

1-(4-Hexylthio-3,5-dimethylphenyl)-3-(4-tert-butylloxycarbonyldimethylmethoxy-3,5-dimethylphenyl)prop-2-en-1-one;

30 1-(4-Hexylthio-3,5-dimethylphenyl)-3-(4-carboxydimethylmethoxy-3,5-dimethylphenyl)prop-2-en-1-one;

1-(2,5-Dimethoxyphenyl)-3-(4-tert-butylloxycarbonyldimethylmethoxy-3,5-dimethylphenyl)prop-2-en-1-one;

1-(2,5-Dimethoxyphenyl)-3-(4-carboxydimethylmethoxy-3,5-dimethylphenyl)prop-2-en-1-one;

1-(3,5-Dimethyl-4-(morpholin-4-ylethyloxy)phenyl)-3-(4-ethyloxycarbonyl dimethylmethoxy-3,5-dimethylphenyl)prop-2-en-1-one hydrochloride;

1-(3,5-Dimethyl-4-(morpholin-4-ylethyloxy)phenyl)-3-(4-carboxydimethylmethoxy-3,5-dimethylphenyl)prop-2-en-1-one;

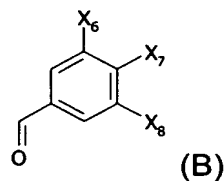
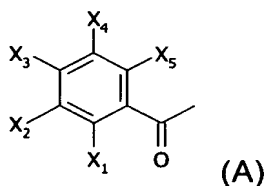
1-(4-Bromophenyl)-3-(4-tert-butyloxycarbonyldimethylmethoxy-3,5-difluorophenyl)prop-2-en-1-one;

1-(4-Bromophenyl)-3-(4-carboxydimethylmethoxy-3,5-difluorophenyl)prop-2-en-1-one;

1-(4-Methoxy-3-trifluoromethylphenyl)-3-(4-tert-butyloxycarbonyldimethylmethoxy-3,5-dimethylphenyl)prop-2-en-1-one;

1-(4-Methoxy-3-trifluoromethylphenyl)-3-(4-carboxydimethylmethoxy-3,5-dimethylphenyl)prop-2-en-1-one.

14. Method for preparing compounds represented by formula (I) such as defined in any one of the previous claims, characterized in that it comprises contacting in basic medium or in acidic medium at least one compound corresponding to formula (A) with at least one compound corresponding to formula (B), formulas (A) and (B) being :



formulas in which  $X_1$ ,  $X_2$ ,  $X_3$ ,  $X_4$ ,  $X_5$ ,  $X_6$ ,  $X_7$  and  $X_8$  are defined as in any one of the previous claims,  $X_7$  can also represent a hydroxyl or thiol group.

15. Intermediate compounds, characterized in that they are selected in the group consisting of :

1-(4-(Pentylthioethoxy)phenyl)-3-(4-hydroxy-3,5-dimethylphenyl)prop-2-en-1-one;

1-(4-((R,S)-5-[1,2]dithiolan-3-ylpentoxy)phenyl)-3-(4-hydroxy-3,5-dimethylphenyl)prop-2-en-1-one;

1-(4-Methylthiophenyl)-3-(4-hydroxy-3,5-dibromophenyl)prop-2-en-1-one;

1-(4-(Cyclohexylethyloxy)phenyl)-3-(4-hydroxy-3,5-dimethylphenyl)prop-2-en-1-one;

1-(4-Methylthio-3,5-dimethylphenylphenyl)-3-(4-hydroxy-3,5-dimethylphenyl)prop-2-en-1-one;

1-(4-Methoxy-3,5-dimethylphenyl)-3-(4-hydroxy-3,5-dimethylphenyl)prop-2-en-1-one;

1-(4-(Cyclohexylethyloxy)-3,5-dimethylphenyl)-3-(4-hydroxy-3,5-dimethylphenyl)prop-2-en-1-one;

1-(4-(Cyclohexylthioethyloxy)phenyl)-3-(4-hydroxy-3,5-dimethylphenyl)prop-2-en-1-one;

1-(2,4,5-Trimethylphenyl)-3-(4-hydroxy-3,5-dimethylphenyl)prop-2-en-1-one;

1-(4-(Cyclohexylthioethyloxy)-3,5-dimethylphenyl)-3-(4-hydroxy-3,5-dimethylphenyl)prop-2-en-1-one;

1-(4-Methylthiophenyl)-3-(4-hydroxy-3-fluorophenyl)prop-2-en-1-one;

1-(2,3,4,5,6-Pentamethylphenyl)-3-(4-hydroxy-3,5-dimethylphenyl)prop-2-en-1-one;

1-(4-Phenoxyphenyl)-3-(4-hydroxy-3,5-dimethylphenyl)prop-2-en-1-one;

1-(4-Methoxy-3-fluorophenyl)-3-(4-hydroxy-3,5-dimethylphenyl)prop-2-en-1-one;

1-(4-Methoxy-3-methylphenyl)-3-(4-hydroxy-3,5-dimethylphenyl)prop-2-en-1-one;

1-(4-Hexylthio-3,5-dimethylphenyl)-3-(4-hydroxy-3,5-dimethylphenyl)prop-2-en-1-one;

1-(2,5-Dimethoxyphenyl)-3-(4-hydroxy-3,5-dimethylphenyl)prop-2-en-1-one;

1-(4-Bromophenyl)-3-(4-hydroxy-3,5-difluorophenyl)prop-2-en-1-one;

1-(4-Methoxy-3-trifluoromethylphenyl)-3-(4-hydroxy-3,5-dimethylphenyl)prop-2-en-1-one.

16. Compounds according to any one of claims 1 to 13, as medicaments.

17. Pharmaceutical or cosmetic composition comprising, in a pharmaceutically acceptable support, at least one compound represented by general formula (I)



such as defined in any one of claims 1 to 13, optionally in association with another therapeutic and/or cosmetic active agent.

- 5 18. Pharmaceutical or cosmetic composition according to claim 17, intended for the treatment of cardiovascular diseases, dyslipidemias, pathologies associated with syndrome X, diabetes, obesity, hypertension, inflammatory diseases, dermatological diseases (psoriasis, atopic dermatitis, acne, etc.), asthma, disorders related to oxidative stress or for the treatment of ageing in general, in particular skin ageing.